







International Machine Tool & Manufacturing Technology Exhibition

JANUARY 19 - 25, 2023, BANGALORE, INDIA



The official Show Daily of IMTEX 2023

DAY 3 • SATURDAY, JANUARY 21, 2023

Mazak

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ADVANCED TECHNOLOGY SOLUTIONS

Soaring High

Yamazaki Mazak Corporation has always been keenly attuned to its Indian customers' needs. With its highly trained manpower for providing turnkey solutions and after-sales service, the company has grown from strength to strength. The recent development in its success story is a production base in Pune which is slated to take the company to the next rung on the ladder.



(L-R): Anil Bhardwaj, Managing Director, Yamazaki Mazak India Pvt Ltd; Vivek Sharma, Chairman, Yamazaki Mazak India Pvt Ltd; Mr Takashi Yamazaki, President, Yamazaki Mazak Corporation, along with his colleagues at the company booth at IMTEX 2023.

leading player in the manufacture of advanced technology solutions including multi-tasking, 5-axis, milling, turning, CNC controls, and automation, Yamazaki Mazak Corporation has an interesting growth story in India.

Beginning humbly from just a small team in Chinchwad, Pune in 1998 that was formed to offer after-sales support, the company has grown exponentially in terms of sales, service, and application network all over India.

In 2011, the company moved to its new Technology Center in Sansawadi, Pune sprawled over a luxurious five-acre area, which today has the most advanced machines installed for live demonstration and training purposes. The facility also houses an Online Support System, a state-of-the-art Spindle Repair Facility, and a National Parts Center. Its other five technical centers are

in Delhi, Ahmedabad, Bangalore, Chennai, and Coimbatore.

The company has a strong customer base, ranging from OEMs to Job Shops on a pan-India basis. Mazak offers over 200 varieties of products in the Indian market, including Multitasking, Automation, Horizontal Machining Centers, Vertical Machining Centers, and Turning Centers.

In line with its philosophy of staying well connected to its custo-

To be continued on 4















mers to gauge their needs, Mazak India offers total turnkey solutions including advanced machines from Japan, and fixtures, tooling, and process engineering from India.

A significant development in India

Yamazaki Mazak Corporation is about to start manufacturing machines in Pune, India. With the new factory in the country, Mazak will have 11 production bases all over the world-five in Japan and six overseas.

The new factory in Pune is yet another proverbial feather in Mazak's hat. It is in the advanced stage of construction and will be operational in March 2023.

Mr Takashi Yamazaki, President, Yamazaki Mazak Corporation, shares what prompted the company to start a manufacturing plant in India, especially in Pune, "We started our operations in India 25 years ago in 1998. We chose Pune as our base because of a strong engineering industry presence and our existing customers. In 2011, we opened a big Technology Center to give support to our customers. We have a strong team in Pune and, hence, the city was the natural choice as the base for the manufacturing plant."

The company will start with Vertical Machining Centers in the first phase. "The investment in the first phase of the Indian factory is approximately ₹240 crore. The site area is approximately 88,185 sqm and the total floor area is 23,130 sqm. The site area is slightly larger than our Oguchi headquarters in Japan, and the total floor area is about half that of the Oguchi headquarters," he adds.

Mr Takashi Yamazaki has been visiting India extensively for the past 25 years and is well-versed with the Indian industry.

When asked which new (sunshine) industry sectors in India look most promising in terms of generating



>> In recent years, as the supply chain of the manufacturing industry has been reviewed worldwide, semiconductor investment in India has been active. Combined with these trends, the demand for machine tools is expected to increase over the medium to long term.

Mr Takashi Yamazaki **President** Yamazaki Mazak Corporation

maximum revenue over the traditional industry sectors, he replies, "Currently, in India, a wide range of industries, including automobiles, agricultural machinery, and aircraft, continue to actively invest in equipment as the domestic demand expands. Especially in recent years, as the supply chain of the manufacturing industry has been reviewed worldwide, semiconductor investment in India has been active. Combined with these trends, the demand for machine tools is expected to increase over the medium to long term."

The ever-present support

Mazak India is the only imported machine tool builder to have online services to resolve its customers' issues. Sensing the pulse of the market, the company has focused more on customer support functions such as Online Application and Service Support.

Its total support program combines many standard-setting programs that it has developed over years of working as a strategic partner to manufacturers. The company focuses on its customer support functions such as Single-Source Support through a dedicated tollfree number and email; Technical Support for the Machine & CNC Control; Factory trained team of experienced field service engineers at 15 different locations across India for quick support; Spindle and Unit Rebuild; Parts Support and Machine maintenance and operation training; and Automation and engineering support to ensure the customer is able to maximize the value of their Mazak purchase, gain the best possible competitive advantage as well as keep the Mazak equipment running smoothly at all times.

Further to facilitate its customers on new machining trends, Mazak has invested heavily in R&D to gear itself up for the current industry trends of Industry 4.0, IIoT, and additive manufacturing that are to influence the machine tool sector in the near future and has also upgraded its existing products accordingly. SD



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STALL: A117 - Hall 1A

DATE: 19th - 25th Jan - 2023

TIME: 10.00 am - 6.00 pm







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MACHINING SOLUTIONS

Keeping Pace with Innovation

The S&T Group of Companies exhibits its innovation and engineering prowess with its premium range of machining technologies in order to stay at the forefront of the industry and give the very best to its customers.



Team S&T Engineers and S&T Machinery at IMTEX 2023

ccording to T Venkatesan, Vice President, S&T Group of Companies, IMTEX 2023 provides a unique opportunity to gauge the future of the industry. It is an ideal platform, he adds, for the Group to demonstrate the precision and productivity of its cutting-edge machines to visitors.

"We offer a wide range of machining solutions to suit the requirements of both small and large-scale industries," he asserts. "We have implemented various strategies at our stall, such as exclusive promotions, new product launches, and upgraded versions of our VMCs to attract more visitors."

Advanced machining solutions

A wide range of machinery, from precise milling machines to longtravel machining centers, is on display to demonstrate engineering brilliance. "We present our cutting-edge machinery at our S&T Engineers stall (1A/113). On display are the finest machines, including the YCM i5 3-Axis Vertical Machining Center, YCM NFX 400A 5-Axis Machining Center, Excetek NP500L CNC Wirecut EDM with Linear Motor Drive, SKITEK SR400S Medium Speed Wirecut EDM, SKITEK SK3060 ADS Surface Grinding Machine, SKITEK SK CNC 900 Milling Machine, and PRATIC PDC CNC 4500 Long Travel Machining Center," informs Venkatesan.

"Furthermore, from S&T Machinery, the manufacturing unit of S&T Group, stall (1A/117), we have an array of STM brand Vertical Machining Centers on display," he further adds. "Additionally, we are showcasing our robust Double Column Machining Center, as well as our heavy-duty angular Cylind-



>> The highly anticipated IMTEX 2023 & Tooltech 2023 and Digital Manufacturing 2023 is happening after a long gap due to COVID-19. We, the S&T Group, are excited to participate and showcase the latest technology and machining solutions at this edition.

T Venkatesan Vice President S&T Group of Companies

S&T Engineers Pvt Ltd

www.stengineers.com Hall & Stall: 1A/A-113

S&T Machinery Pvt Ltd

www.stmcnc.com Hall & Stall: 1A/A-117

rical Grinding Machine, and highperformance Drill Tap Center."

Impacting the industry

"Launching a new product in the industry at a trade show like IMTEX adds value because it can reach the widest audience possible," Venkatesan claims. "Our products have the potential to make a significant impact in the industry and boost productivity."

S&T Engineers' stall is displaying the YCM i5 3-Axis Vertical Machining Center, YCM NFX 400A 5-Axis Machining Center, and Excetek NP500L CNC Wirecut EDM. "Our team conducts live demonstrations of our all-cuttingedge machines, showcasing their power, performance, and precision," he adds.

The high-performance YCM NFX 400A 5-axis vertical machining center is designed especially for small, complex high-quality parts mainly for aerospace, automotive, medical, job shop, and die & mold applications.

NP 500L is a superior quality wire cutting EDM machine. With Smart Corner Control, Stable Discharge Module, and SFC Super Finish Circuit, the machine becomes high precision.







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INDUSTRIAL PROCESS FLUIDS

For a Better and Safer World

Quaker Houghton, a global leader in industrial process fluids, offers customers confidence that their operations will run more efficiently and effectively by optimizing processes, reducing costs, and embracing sustainability.



n 2019, Quaker Chemical merged with Houghton International to form Quaker Houghton. That makes IMTEX 2023 & Tooltech 2023 and Digital Manufacturing 2023 the company's first chance to present its metalworking fluid expertise. "IMTEX 2023 is a very important show for Quaker Houghton, and it has its own relevance as it is happening after four years," says Tridib Majumder, Managing Director, Quaker Houghton India."

During the pandemic, although the company kept in touch with customers virtually through trainings, webinars, and virtual meetings, but, he says, in-person meetings have their own charm. "They allow for a deeper understanding of the customer's vision, plans, pain points, and opportunities to build a strong relationship. IMTEX 2023 in Bangalore provides an ideal platform for such meetings," he adds.

Making a difference

As a market leader, Quaker Houghton believes it must advance environmental and social progress in a responsible and ethical manner. At IMTEX 2023, it is presenting its sustainable visions, goals, and how customers can benefit from them.

Majumder claims, "We believe that by uniting our people, expertise, and resources, we can deliver contributions that will result in a better and safer world and make a positive difference in the lives and organizations we touch."

The right start

The company is showcasing various products that would contribute to its customers' sustainable goals. It is working on green chemistry and toward the goal of reducing the use of fossil-based raw materials by 30 percent. "We are introducing ways or offerings that can reduce the environ-



After Quaker Chemical merged with Houghton International to establish Quaker Houghton in 2019, IMTEX 2023 & Tooltech 2023 and Digital Manufacturing 2023 is our first opportunity to demonstrate the company's strength as a leader in metalworking fluids.

Tridib Majumder Managing Director Quaker Houghton India

Quaker Houghton

www.quakerhoughton.com Hall & Stall: 5/B-121

mental footprint and achieve customers' sustainability goals," Majumder comments.

He suggests Grindaix, a recently acquired technology startup that assists customers in precisely measuring and optimizing parameters such as coolant flow, velocity, temperature, nozzle angles, and pressures. This can significantly increase the success of coolant application. "In simple terms, the technical solutions from Grindaix let you avoid any waste of lubricoolant in your metal processing work," he adds.





We invite you for a live demo

Hall: **5** Stall No.: **B 107**



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SHOWDAILY

TOOLING AND CUTTING SOLUTIONS

Proffering Competitive Solutions

A specialist in providing best-in-class integrated tooling and cutting solutions, Motherson Techno Tools Ltd (MTTL) brings the latest technologies to customers and offers single-window solutions for all machining needs.



n the return of IMTEX 2023 & Tooltech 2023 and Digital Manufacturing 2023, Rajiv Malhotra, Chief Operator Officer, Motherson Techno Tools Ltd, says, "While we have learned to work in a virtual way during the pandemic, an in-person show gives a

very good opportunity to network with customers and suppliers. People are keen to interact and find better solutions than their present ones." He claims that the new solutions displayed are meant to ease consumers' daily problems and draw people to the company's booth.

Enhancing machining process

A range of new Motherson products helps customers improve their machining processes. Together with its JV partner, Sumitomo Electric Industries, the company has been a leader and pioneer in super-hard materials. "We are displaying our latest grades and solutions in poly and mono crystalline diamond and CBN," Malhotra shares.

As the demand for accuracy and burr-free machining grows, the company has developed rigid tool holding and burr-free machining solutions, as well as Broaches and Gear cutting tools, which are also showcased at the show. "Some unique concepts like the Flat drill for straight through drilling on cylindrical/inclined surfaces are also on display," he informs.

Prioritizing safety and finish

The company has a live demonstration of hole processing technology for deburring holes after drilling. "When safety and finish are important, this technology provides a lasting and automated solution to



» A complete new series of steel turning carbide grades, endmills, drills, and reamers make us an ideal partner for the machining needs of our present and future customers. «

Rajiv Malhotra Chief Operator Officer Motherson Techno Tools Ltd

Motherson Techno Tools Ltd www.mothersontools.com Hall & Stall: 4/B-143

removing drill burrs at the hole exit, eliminating manual deburring," explains Malhotra. "Sharp burrs are not desired at the hole entry and exit, and can cut fingers when handling or assembling the component. The burrs are also unattractive."

The technology on display shows a spring-loaded insert in a tool that can fit in the Tool magazine of the CNC machine. "This will then be a standard cycle after drilling, which will eliminate all burrs," he further adds. "When you are drilling a large number of standard holes, this gives a competitive and convenient solution."

PRECISION MACHINES

JD-1 for High-Speed Machining

MW has launched a precision machine JD-1. It has a direct drive spindle BBT 30, with a speed of up to 24,000 rpm. The machine has a rigid structure with a wider working area. It is ergonomically designed for easy loading and



Lakshmi Machine Works Ltd www.lmwcnc.com Hall & Stall: 5/B-107

unloading operations. The machine comes with a faster tool change time of 1 sec. It is designed for high-speed machining for materials such as aluminum and special aluminum alloys. It is suited for components for electronic segments such as mobile cases, laptops, and tablets.

LMW has established a pan-India network of sales and services that cater to every industrial city in India. The Machine Tool division provides integrated solutions for various industrial needs in Automobile, Aerospace, Die & Mould, Defence, Pumps & Valves, Railways, Medical Equipment, Forging, and General Engineering industries. LMW also provides automation solutions such as simple Loaders, Gantry systems, and Robots.

LAUNCH - COOLANT TANKS

Coolant Tank Goes Smart

-Tech, with years of experience in manufacturing various types of coolant tanks, has now introduced a coolant tank that is smart and one that gives feedback on all critical parameters to make it Industry 4.0-ready.

Parameters like flow, pressure, coolant levels, Ph value of the coolant, and temperature of the coolant are all measured, and these values are displayed on an HMI using a program specially developed for this purpose. Lower and higher values of all these parameters can be defined and taken into machines' logic for further processing. With this, the coolant tank, which is generally given very low

importance, has come of age and can be a part of the Industry 4.0 initiative.

U-Tech hopes these features will be appreciated by the industries that really care for Industry 4.0. U-Tech is demonstrating this product in its booth and invites all to visit for a live demo.

U-Tech Associates www.u-techindia.com Hall & Stall: 5/B-120





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12

INTERNATIONAL ASSOCIATION - AFM CLUSTER

Beefing Up Indo-Spanish Ties

José Pérez Berdud, President, AFM Cluster & Managing Director, Fagor Automation, believes that despite all the issues we are facing globally, there is still a strong need to invest in different industrial sectors.

osé Pérez Berdud, President, AFM Cluster & Managing Director, Fagor Automation, is highly optimistic when it comes to Indo-Spanish relations. "India is a significant partner for Spain. In 2021, India was the 6th biggest export market for Spanish machine tool manufacturers, with almost ₹12 billion exported over the last five years. The country is usually in the top 10 of our export destinations, and looking at our order backlog in India, we have a bright future ahead," he shares.

Spanish participation in IMTEX 2023

Spain is well known for producing world-class high-performance and high-precision milling and boring or turning machines. Various multitasking and automation capabilities are available as options for boosting productivity and part quality. "We are also leaders in some specific aerospace grinding or automotive machining applications and in the production of some critical components for machine tools, such as big-size high-precision ballscrews," informs Berdud.

There are seven Spanish companies exhibiting directly at IMTEX 2023, apart from AFM Cluster and ICEX, Spanish Institute for Foreign Trade. These are Ekin (broaches and broaching machines), Fagor Automation (CNC and automatization systems, feedback systems), Ibarmia (machining centers, milling machines, and lathes), Juaristi (boring and milling machines), Nicolas Correa (milling machines and machining centers), Shuton (ballscrews), and Zayer (milling machines and machining centers).

Digitalization, a strong driver for the economy

Digitalization, points out Berdud, is the next step for productivity. "It is the way to develop better companies and offer more added value to custo-



>> The globally known Spanish advanced manufacturing manufacturers' capacity to adapt to customers' needs matches brightly with several outstanding Indian sectors, such as energy generation, automotive, aerospace, railways, construction, and capital goods.

> José Pérez Berdud **President, AFM Cluster Managing Director, Fagor Automation**

mers. Spanish advanced manufacturing companies are working hard in this field. From connectivity, machine and process monitoring, all through digital twin and various simulation technologies, to machine learning or artificial intelligence, there is a whole development itinerary that we are already walking," he adds. Fagor Automation as a CNC and Feedback System producer has developed a specific software platform called Fagor Digital Suite that enables both machine tool manufacturers and end users and shortens the path to profitability using digitization.

AFM Cluster

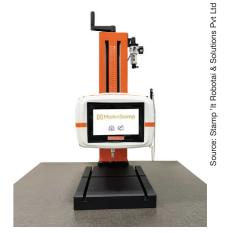
www.afm.es Hall & Stall: 4/A-127

PIN MARKING MACHINES

MNS-HTC for Deep Marking

NS-HTC (Touch Screen Model) comes with a robust construction with high-capacity motors and guides for deeper markings. All electronics built inside the marking head save floor space. The MNS-HTC pin marking machines are available as 2- and 4-axis versions in both Electric and Pneumatic working. The standard 2-axis marking heads, coupled with a manual or motorized Z stand and a true interpolated rotary axis, are available, especially for the Electric marker. The Electric markers also have an optional Auto-Sensing attachment that can be used with the motorized Z stand to mark different height components.

With unlimited storage capacity, the machine has a 7-inch display. A Resistive Touch Screen Display is built into the marking head. With regard to 2D Barcodes, Data matrix and QRCode marking are possible. It can directly print



marking data to barcode labels from a barcode printer connected to the RS232 port. Any bus Converter Device for ProfiNET or Profibus Connectivity over RS485 Modbus can be used for industrial communication.

Stamp 'It Robotai & Solutions

www.marknstamp.com Hall & Stall: 2A/B-102

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CASE STUDY

Power at its Most Liquid



ansera is an engineering-led integrated manufacturer of complex and critical precision-engineered components across automotive and nonautomotive sectors since 1986. Its capabilities include manufacturing finished components whose weights range from 1.75 gm (an aerospace component) to 8,940 gm (an automotive component).

Sansera has grown its precision components manufacturing business organically in India by commencing supplies to the two-wheeler and four-wheeler verticals and further diversified the business, focusing on precision manufacturing for demanding markets in the heavy-duty commercial vehicles and non-automotive sectors such as off-road vehicles,

Company Name: Sansera Engineering Ltd

Award Category: Tool Optimization

Industry: Aerospace Precision Machined Parts

Production: Side plates **Application:** Profile milling **Material:** Hardened Steel

Objective: Tool Cost Reduction

The company was looking for technological advancements in the market to best suit its manufacturing processes and bring down the overall cost.

Solution: Coolant B-Cool 755

The calculations revealed that the investment paid off within a month and produced a net saving of nearly ₹3.0 million per year.

Blaser Technical Consultant: Prajwal A S





agriculture, aerospace, industrial and medical.

The company continually strives towards better business practices with good governance. The production engineering team, led by Ravikumar, is continuously looking for technological advancements in the market to best suit the company manufacturing processes and to bring down the overall cost.

Taking the Liquid Tool approach

Koushal Kumar and Prajwal AS from Blaser visited the Sansera facility and discussed the added values through the Liquid Tool approach. Blaser has rich global experience and expertise in machining a range of aerospace materials along with global aircraft OEMs approvals like Airbus, Boeing, etc. The possible benefits of the Liquid Tool inspired the connection between Blaser Swisslube and Sansera to work on the optimization of tool costs.

The Blaser specialists conducted a detailed on-site analysis and determined a very strong probability of increasing tool life while minimizing tool costs by selecting a proper coolant. Blaser suggested testing its high-performance B-Cool 755 formulation.

Blaser Coolant B-Cool 755 is a lubricant and coolant designed for use in metalworking operations such as turning, milling, drilling, and grinding. It is a high-performance coolant that is designed to improve tool life, surface quality and reduce the risk of thermal damage to the workpiece. B-Cool 755 is a water-miscible fluid that is composed of mineral oil,



>> The Blaser specialists conducted a detailed on-site analysis and determined a very strong probability of increasing tool life while minimizing tool costs by selecting a proper coolant. Blaser suggested testing its high-performance B-Cool 755 formulation.

Ravi Kumar DGM-Operations Sansera Engineering Ltd

synthetic oil, and additives. It is suitable for use on ferrous and nonferrous metals, including steels, stainless steels, aluminum and titanium. It can be used in a wide range of applications, from light to heavy-duty machining operations. The coolant is known for its highlubrication properties which help to reduce friction and heat generated during the machining process, resulting in longer tool life and improved surface quality. It also contains corrosion inhibitors to protect the machine parts and the workpiece from corrosion.

Leveraging the coolant

For the project's definition, a precise strategy was established. Over the course of one month, the test data was collected in an organized and transparent way. This intense testing resulted in the optimization of tool cost to the tune of 20 percent along with better consistency. The calculations revealed that the investment paid off within a month and produced a net saving of nearly ₹30 lakh per year.

Blaser Swisslube Solutions
Pvt Ltd

www.blaser.com Hall & Stall: 1B/A-111









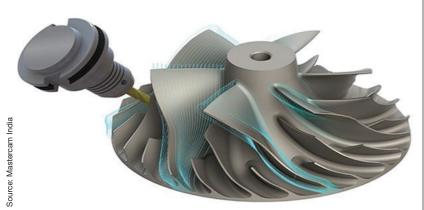




16

MANUFACTURING SOFTWARE

For Machining Multiblade Shapes



astercam's Blade Expert is a powerful solution for streamlining the process of generating toolpaths for impellers, fans, and marine propellers. These complex shapes often require specialized programming techniques to be machined accurately, but Blade Expert simplifies the process by providing a userfriendly interface that follows the standard Mastercam layout for multi-axis toolpaths. This ensures that users can quickly become familiar with the software and start creating efficient toolpaths with minimal learning time.

Blade Expert is designed specifically to address the challenges of machining multiblade shapes. With this tool, users can easily remove the material between the blades, finish the blades and splitters, complete the floor, and finish the fillets. This helps to turn what could be a complex and time-

Mastercam India

www.mastercamindia.com Hall & Stall: 4/C-122

consuming process into a routine solution that can be easily implemented in a variety of manufacturing settings.

In addition to its comprehensive capabilities for machining multiblade shapes, Blade Expert also integrates seamlessly with other Mastercam products. This allows users to take advantage of the full range of Mastercam's advanced features and functionality, including multi-axis toolpaths, design and modeling, and advanced machining strategies. With Blade Expert, manufacturers can achieve greater efficiency and accuracy in their machining processes, resulting in higher-quality products and increased profitability.

FIXTURES AND WORKHOLDING SOLUTIONS

VR and AR for the **Manufacturing Industry**



RV Forms and Gears www.rvformsandgears.com www.formsandgears.com Hall & Stall: 1B/B-108

orms and Gears is using Virtual Reality (VR) to allow clients to interact with designers of fixtures and special equipment. The company is displaying Virtual Reality models of Cylinder Block Fixtures, Railway Bogie Laser Welding Special Machines, etc., at its stall at IMTEX 2023 & Tooltech 2023 and Digital Manufacturing 2023.

Multiple teams across the world can interact using Virtual/Augmented Reality (AR), and the complete machining process can be conceptualized, designed, and viewed.

Reii Varghese, Managing Director, Forms and Gears, says, "The adoption of VR in design and development gives designers and clients a seamless ability to simulate the prototype or the product design at the primary stage, providing useful insights which are helpful to identify errors and bugs in complex designs at an early stage."

He adds, "Numerous studies point to a reduction in workers available for manufacturing jobs and a growing skill gap. AR and VR can speed up the onboarding of new workers and improve worker productivity by offering more immersive on-the-job training. AR can project video, graphics, and text that can visually guide a worker, step by step, through assembly or maintenance tasks. The use of VR also allows managers to simulate assembly and machining processes, which allows them to identify issues that may be potentially troublesome or dangerous in the future."

"By implementing VR/AR-based solutions, manufacturing companies can gain a considerable competitive advantage and make their routine processes safer and more productive," he notes.



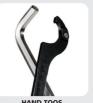


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18

DOUBLE COLUMN MACHINING CENTERS

KX Large Series for Complex Parts



Jyoti CNC Automation Ltd www.jyoti.co.in Hall & Stall: 5/B-112

he KX Large Series is a range of high-performance 5-axis double-column machining centers for the machining of complex parts. The series offers a choice of portal architecture equipped with a forked Milling Head with 2 Rotational Axes, the rigidity of structure, dynamic of motors and drives, and CNC algorithm of the numerical controller that allow high-cutting speeds, high feed rates, and high acceleration.

For the KX Large Series, B and C Axes are equipped with an angular encoder directly mounted that offers

high positioning accuracy. Both axes have direct-driven high torque motors designed specially by Jyoti Huron. Optical measuring scales contribute to reaching high precision. This motorization offers the advantages of continuous high speed, high accelerations, high stiffness, no backlash, and no wear. The strong clamping and working torque allow machining with high torque for roughing. It also permits machining at a high speed into 4 and 5 simultaneous axes. The KX Large series machines are equipped with a high speed of 20,000 rpm for KX 50 and 18,000 rpm for KX 100 and KX 200. A high-power Electro Spindle is a standard feature. Several different types of spindle options are available. They offer a good compromise between power and torque. These machines assure high performances in roughing as well as in finishing along with greater accuracy in positioning and in 3D contouring. The machines are excellent for aerospace, defense, die-mould tooling production, and heavy engineering segment components. SD

WATER SOLUBLE CUTTING FLUIDS

X-COOL® from Zavenir Daubert



Zavenir Daubert India Pvt Ltd www.zavenir.com Hall & Stall: 4/A-154

-COOL® Water Soluble Cutting Fluids are based on Micro Emulsion Technology. These micro emulsions are thermodynamically stable compared to the conventional fluids that are kinetically stable emulsions and separate into oil and water over time. The nanoparticle size of X-COOL® micro emulsions ensures that there is a significant reduction in carryover losses. High wetting and rinsing properties enable quick and stable build-up of a chlorine-free EP additives layer at a microscopic level to improve

tool life and surface finish. These emulsions appear clear or translucent that helps in operation visibility. Neutral and stable pH does not lead to skin irritation that causes from harsh chemicals controlling microbial activity. The series provide high bio stability even at low concentrations that produce sterile bacteria-free solutions and emulsions with a long sump life. Also, DM or DI water is not a compulsion, as X-COOL® Water Soluble Cutting Fluids can work in both soft and hard water without any foaming or emulsion stability issues.

Benefits

- The cutting fluid being chlorine-free results in higher-productivity with environment-friendly formulations.
- The Micro Emulsion technology helps in achieving lower carryover losses and consumption reduction.
- The latest Surfactant Technology leads to no foaming and better fluid dynamics.
- Its natural and stable pH causes no skin irritation or smell issues.



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Indian Machine Tool
Manufacturers' Association

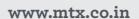
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ROTARY TABLES

Source: Eppinger Tooling Asia Pvt Ltd/ESA Eppinger GmbH

As Unique As Requirements



ach Rotary Table from
Eppinger is integrated with
highly precise angle
sensors, giving positioning

feedback through the closed loop and assuring extremely high bi-directional position accuracy of ±5 in. by default. The low and optimum gear ratio between the motor and spindle gear ensures high-speed indexing without compromising on the torque. The electrically preloaded, dual-motor servo drive with closed control loop of the motors allows for adaptive torque output as cutting forces increase. The Twin drive concept allows for backlash-free bi-directional positioning over a lifetime and also provides sufficient clamping without any external pneumatic or hydraulic clamping system for lighter applications.

Each Rotary Table comes with its own control unit. The connection via Eppinger Interface allows for Plug & Play operation without the need for a 4th axis availability in the machine. The Flexible plate changing system design with cylindrical and conical

retainer enables the user to change the turn tabletop easily as per requirement i.e T-Slot tabletop or other face plates suitable for Hainbuch, Lang, Schunk, Jergens, etc. The symmetrical housing design provides a Universal mounting option to the users i.e. same rotary table can be mounted as left motor mounting, right motor mounting, top motor mounting, and horizontal mounting positions based on the application. Eppinger Rotary Tables are available in four sizes i.e Dia. 160, Dia. 200, Dia. 260 and Dia. 320. An array of accessories including Support Tables, Tailstock, Rotary Union, Hydro Pneumatic Booster, Rotary Cylinder, Chucks, etc. are available based on application and requirement.

PROCESS ORIENTATION

Knowing VP Tools' Process

P Tools does the tooling-up of the component with the first-time-right process in the targeted cycle time and cost per component.

Various stages of the process

 Proposal Stage – Understanding the component drawings for GD&T, Process Selection, and tool list preparation.

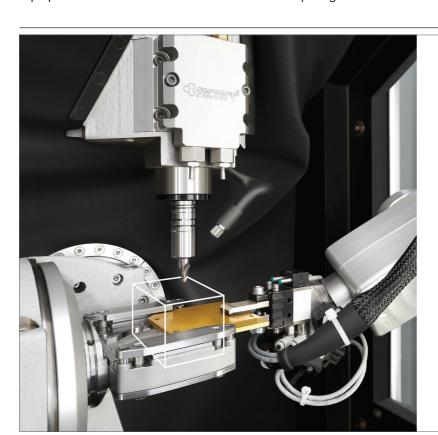
- Tool Layout Stage Finalization of the tool layout with necessary adaptation and checking for fouling of the fixture. Once all the layout is thoroughly checked, then comes the submission of the commercial proposal with the total cost, CPC, cycle time, etc.
- Execution Stage Processing of order as per agreed terms and

run off as per given cycle time, CPC, and support in case of any change within a short span.

The company's key success factors are its wide range of offerings, including solid carbide tools, tailor-made solutions in indexable tools, multi-brand solutions, quick response, and design and application expertise.



VP Tools India Pvt Ltd www.vptools.in Hall & Stall: 4/B-146



CHIRON Group

Process advantages

- 80,000 rpm spindle speed
- ± 2.5 μm precision
- 78 56 50 mm travel X Y Z max.
- $^-$ 50 x 50 x 50 mm workpiece max.

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www.chiron-group.com

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22







GRINDING MACHINES

HELITRONIC G 200 from WALTER



is introducing latest addition to the product range in India now: The HELITRONIC G 200 tool grinding machine with an innovative machine concept on a small footprint.

On a floor space of less than 2,3 sqm, the costefficient HELITRONIC G 200 offers tool grinding at its best: Production and re-sharpening of rotationally symmetrical tools in the diameter range of 1 to 125 mm, with a maximum tool length of 235 mm and a tool weight up to 12 kg. The maximum grinding wheel diameter is 150 mm.

The ergonomic design and the integrated and swivelling multifunction touch panel with a 21.5 in. monitor facilitates the operation and accessibility of the work area. A low-vibration solid mineral cast C-frame construction offers high damping capabilities and temperature stability for maximum precision in grinding results. The linear axes X, Y, and Z are built according to the high WALTER quality standard. The rotating A and C axes are equipped with torque motors and provide an unbeatable lifetime with minimum service

effort. For maximum flexibility, a loading system is available: The 'Top loader' is directly integrated into the working envelope of the machine for easy access and, therefore, requires no additional space. Suitable for tools from diameter 3 mm to 16 mm, the maximum tool capacity of the loading system is for example 500 tools at a diameter of 3 mm. The Top loader uses standard robot pallets and an automated electrical teaching.

United Grinding India LLP

www.grinding.ch Hall & Stall: 4/C-115

METALLOGRAPHY LAB SOLUTIONS

Total Solutions for Metallography & Hardness Lab

hennai Metco provides a one-stop solution for Metallography Lab, and is the largest player in this part of the world and a leader in India.

The company offers an entire range of Precision Cutters, Abrasive Cutters, Polishing Machines, Mounting Presses, Belt Grinders, Metallurgical Microscopes, Image Analysis Software, Hardness Testers, etc. Turnkey Lab is a new concept and a new trend that offers new benefits to customers.

It is advisable to take advantage of Chennai Metco's expertise in lab design and get the full lab including tables/furniture to establish a cost-effective laboratory. The company ensures seamless implementation of a professional lab set-up and assured performance, which more and more companies are now using and benefitting from it.

Advantages include - Single purchase order; No follow-up hassles; No mismatch of multiple suppliers, Single accountable agency, and Resultant cost savings to the company.

Technical expertise and in-house manufacturing support are provided to meet customer requirements. A strong Customer Support team is available to back the customers after sales.

Sample preparation requires good quality consumables for best results. Chennai Metco provides consistent quality consumables for Metallography needs. The company is the only total laboratory solutions provider for Metallography Lab in India.

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- Finishing School in Production Engineering (Duration 6 Weeks)
- Hands-on Training on Industrial and Machine Automation for Digital Manufacturing (Duration 6 Weeks)
- **Product Optimization through Finite Element Methods** (FEM) (Duration 6 Weeks)
- Master class in Implementing Industry 4.0 in Manufacturing – A Hands-on approach (Duration 4 Weeks)

Whom it is applicable

- Fresh engineers seeking a career in manufacturing industry
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- New hires in industry
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ACKNOWLEDGEMENTS & AWARDS

Honoring Excellence

IMTMA has always been at the forefront to foster innovation and reward the bright minds behind it. This year, two new awards have been introduced to celebrate the creativity that has gone into the making of some of the ground-breaking products and technologies being showcased at the show.







he 'IMTMA Best Design Award' has been bagged by amace Solutions Pvt Ltd, Bharat Fritz Werner Ltd (BFW), and Bestek Engineering Pvt Ltd for their exemplary indigenously designed, developed, and

manufactured products in Metal Cutting technology.

Only IMTMA member companies could apply for the award and their products had to be exhibited for the first time at IMTEX 2023. The evaluation was based on

various parameters such as technology, design, innovation, functionality, energy efficiency features, safety features, import substitution (Aatma Nirbhar Bharat), and unique selling proposition, amongst others.

Thirteen companies in all submitted their nominations for the award including Abhijat Equipments Pvt Ltd, Ace Designers Ltd, m2nxt Solutions (a BFW subsidiary), Sahajanand Laser Technology Ltd, UCAM Pvt Ltd, Bestek Engineering Pvt Ltd, and Carbtools (India Pvt Ltd).

Export performance

The winners of the 'IMTMA Export Performance Award' are Trishul Machine Tools Pvt Ltd and Grind Master Machines Pvt Ltd. This award is to recognize IMTMA member companies that have made significant strides in the export of machine tools and related products manufactured in India

The evaluation was done by an independent jury committee constituted by IMTMA and was based on various parameters such as export performance in the last five years, export as the percentage of production, infrastructure in export markets, vision/ mission for exports, countries exported to, repeat export orders, key USP in export markets, amongst others. Other companies that also applied for this award included Ace Manufacturing Systems Ltd, Fenwick & Ravi, ISGEC Heavy Engineering Ltd, Kirpekar Engineering Pvt Ltd, and Sahajanand Laser & Technology Ltd.

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For more details, please log on to: www.productivity.imtma.in or call Abhishek on: +91 9844294387

















25

ROTARY TABLES

Precision is Not Dispensable

FIBRO India Precision Products Pvt Ltd www.fibro-india.com Hall & Stall: 4/B-135

FIBRO India Precision Products is showcasing a wide range of offerings in the two verticals it specializes in—standard products for die & mold making industries and rotary tables for metal cutting and automation systems at the much-awaited IMTEX 2023 & ToolTech 2023.





>> There has been a paradigm shift in all facets of business including the manufacturing industry after the pandemic phase. Now the whole world is looking at India with great expectations.

> Vivek Nanivadekar Executive Director FIBRO India Precision Products Pvt Ltd

Vek Nanivadekar, Executive Director, FIBRO India Precision Products Pvt Ltd is relieved that the long-awaited IMTEX & Tooltech is finally taking place.
FIBRO India has two verticals – Stan-

dard Parts for die & mold making

industries and Rotary Tables for metal

cutting and automation systems. The company is showcasing a range of Standard Parts like Oil-less guide elements, Nitrogen Gas springs, a wide range of Aerial and Die-mounted CAM units, and Wireless Pressure Monitoring (WPM) systems for consistent and uniform performance of Gas

springs during the press operation so that the output is with zero defect. It is also showcasing its range of Rotary Tables for automation and metal cutting applications.

FIBROMOD Rotary Table with modular construction for metal cutting applications has been launched at show. Large-size CAM units with 200 mm width, for sheet metal and dies, have also been launched. "FIBRO India is the first one to localize CAM-driven Rotary Tables as well as Aerial Cam units for the sheet metal industry. Both these products are import substitutes, our small contribution to 'Aatmanirbhar Bharat'," he concludes.



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METAL FORMING



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SF 3015H - Laser Cutting Machine

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STALL: A113 - Hall 1A

DATE: 19th - 25th Jan - 2023

TIME: 10.00 am - 6.00 pm



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